

CLAIMS LISTING

1. (original) A process for producing a thermoformable polyurethane foam-containing sound insulative laminate, comprising:
 - (1) preparing a foam-forming composition from: (a) from 0 to 100% by weight of total polyol of a graft polyol having a functionality in the range from about 2.5 to 3.5 and a hydroxyl number in the range from about 20 to 70; (b) from 0 to 20% by weight of total polyol of a polyether polyol; (c) a polyisocyanate containing at least 80% by weight toluene diisocyanate and up to 20% by weight methylene diisocyanate; and (d) one or more blowing agents,
 - (2) forming the polyurethane foam from the foam-forming composition under controlled pressure conditions from about 0.50 to about 0.95 bar (absolute), wherein the density of the resulting polyurethane foam is 1.3 lb/ft³ or less; and
 - (3) joining a layer of the polyurethane foam to a barrier layer to form the sound insulative laminate.
2. (original) The process of claim 1, wherein the polyurethane foam has an IFD₂₅ of 50 lbs or below.
3. (original) The process of claim 1, wherein the foam-forming composition includes (e) one or more flame retardants.
4. (original) The process of claim 1, wherein the foam-forming composition includes (e) one or more catalysts.

5. (original) The process of claim 1, wherein the foam-forming composition includes (e) one or more surfactants.
6. (original) The process of claim 1, wherein the foam-forming composition includes (e) from 0 to 20% by weight of total polyol of a polyester polyol.
7. (original) The process of claim 1, wherein the foam-forming composition includes (e) one or more additives selected from the group consisting of: stabilizers, antimicrobial compounds, extender oils, dyes, pigments, and antistatic agents.
8. (original) The process of claim 1, wherein the blowing agent is water.
9. (original) The process of claim 1, wherein the barrier layer is formed of a material selected from the group consisting of: filled asphalt, filled EVA, filled EPDM, filled rubber, filled PVC, and bitumen board.
10. (original) The process of claim 1, wherein the polyurethane foam retains a 70% compression set after thermoforming the laminate.
11. (original) The process of claim 1, wherein the polyurethane foam is not pre-treated with a thermoforming agent prior to thermoforming the laminate.
12. (withdrawn) A thermoformed article formed from the laminate of claim 1.

13. (withdrawn) A sound insulator for an instrument panel, comprising:
a flame retardant, thermoformable, flexible, open celled polyurethane foam having a density of 1.0 lb/ft³ or less and an IFD₂₅ of 50 lbs. or less.
14. (original) The sound insulator of claim 13, wherein the foam is in the form of a sheet or slab and a reinforcement, backing or decorative covering is applied to at least one surface of the foam sheet or slab.
15. (withdrawn) The sound insulator of claim 14, wherein the reinforcement, backing or decorative covering is applied to a surface of the foam sheet or slab as the foam is thermoformed.
16. (withdrawn) The sound insulator of claim 13, wherein the foam is thermoformed under compression at a temperature in the range of about 300°F to about 400°F to form the sound insulator.
17. (withdrawn) The sound insulator of claim 16, wherein the thermoformed foam retains a 70% compression set.
18. (withdrawn) The sound insulator of claim 13, wherein the foam is in the form of a sheet or slab that has a thickness of from about 0.3 to 2.0 inches before it is thermoformed.
19. (withdrawn) The sound insulator of claim 13, wherein the foam is not pre-treated with a thermoforming agent prior to thermoforming.

20. (original) The sound insulator of claim 14, wherein the covering is formed of a material selected from the group consisting of: filled asphalt, filled EVA, filled EPDM, filled rubber, filled PVC, and bitumen board.

21. (original) The sound insulator of claim 20, wherein the covering is adhered to the foam with an adhesive prior to thermoforming.